

**REMARKS**

Reconsideration and withdrawal of the rejections set forth in the Office Action dated September 18, 2008, is respectfully requested in view of this amendment. By this amendment, claim 18 has been cancelled and claims 1, 2, 5-11, 13-16 and 19 have been amended. Claims 1-3, 5-11, 13-17, 19 and 20 are pending in this application.

Claims 1 has been amended to describe providing said one reinforcing layer before inclusion of the nonwoven web in the pipe sleeve, and providing the reinforcing layer as a constituent part of the pipe sleeve. The claims have also been amended to describe the outer reinforcing layer in terms of providing an outer sheath reinforcing layer. The outer sheath reinforcing layer has been described as added to the trailing end of the nonwoven edge in such a way that the outer sheath reinforcing layer lies on the outside of the pipe sleeve as an outer layer arranged around the full circumference. Claim 9 has been amended to describe the continuous nonwoven web as having a leading end of the outer sheath reinforcing layer overlapping the trailing end of the continuous nonwoven web, in a manner similar to that described in connection with claim 1. Claim 9 also describes means for allowing separation of wound layers in order to reduce external or internal diameter of the pipe. Claim 13 describes the nonwoven web, and the continuous nonwoven web with a leading end of the outer sheath reinforcing layer overlapping the trailing end of the continuous nonwoven web. Claim 13 also describes the material of the outer sheath. Claim 18 has been cancelled without prejudice or disclaimer to the contents therein. In this regard, Applicants note that the subject matter of claim 18 is included in amended claim 9.

Support for the overlapping trailing edge of the nonwoven web is found in the specification, *inter alia*, at page 10, lines 4-12 of the PCT application. Support for the descriptions of the reducing external or internal diameter and of the materials is found in the original claims.

In the outstanding Office Action, the Examiner rejected claims 9, 10, 14 and 18 under 35 U.S.C. §102(b) as being anticipated by GB Patent No. 1 214 330 to Baldwin-Ehret-Hill Inc.

(hereinafter referred to as *B-E-H*). Claims 1, 2, 6-8 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over *B-E-H* in view of U.S. Patent No. 3,346,016 to Blau et al. (hereinafter referred to as *Blau*). Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over *B-E-H* in view of the *Blau*, as applied to claim 1 above, in view of U.S. Patent No. 3,824,140 to Hofmann (hereinafter referred to as *Hofmann*). Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over *B-E-H* in view of *Blau*, as applied to claim 2 above, in view of U.S. Patent No. 5,056,564 to Roth (hereinafter referred to as *Roth*); rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over *B-E-H*, as applied to claim 9 above, in view of *Roth*; rejected claim 13 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,576,206 to Lauren (hereinafter referred to as *Lauren*) in view of GB Patent No. 2 032 845 to Seitz (hereinafter referred to as *Seitz*); rejected claims 9, 15, 16 and 20 under 35 U.S.C. §103(a) as being unpatentable over *Blau* in view of *Seitz*; and rejected claim 17 under 35 U.S.C. §103(a) as being unpatentable over *B-E-H*, as applied to claim 9 above, in view of U.S. Patent No. 5,457,136 to Hartranft et al. (hereinafter referred to as *Hartranft*).

By this amendment, claims 1, 2, 5, 9 and 13 have been amended. Claim 18 has been cancelled without prejudice or disclaimer to the contents therein. In this regard, Applicants note that amended claim 9 is a combination of the subject matter of previously presented claim 9 and previously presented, now cancelled, claim 18. The amended claims clarify the subject matter recited in the rejected claims.

It is respectfully submitted that the above amendments introduce no new matter within the meaning of 35 U.S.C. §132.

#### **Claim Rejections under 35 U.S.C. § 102(b)**

The Examiner rejected claims 9, 10, 14 and 18 under 35 U.S.C. §102(b) as being anticipated by *B-E-H*.

### Response

By this Response and Amendment, claims 9, 10 and 14 have been amended or depend from amended claims and, as amended, the rejections thereto are respectfully traversed. Claim 18 has been cancelled without prejudice or disclaimer to the contents therein. Therefore, the rejection thereto is moot.

For a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP §2131.

Amended claim 9 recites:

"... at least one reinforcing layer on the inner side of the pipe and/or enclosed ... between successive wound layers, an outer sheath reinforcing layer ... added to a trailing end of the continuous nonwoven web and wound fully circumferentially around the continuous nonwoven web with a leading end of the outer sheath reinforcing layer overlapping the trailing end of the continuous nonwoven web, and ... allowing separation of wound layers in order to reduce external or internal diameter of the pipe."

*B-E-H* discloses (page 3, lines 33-35) that "the pipe cover 10 is formed by spirally winding superimposed mats of different fibrous materials into a tubular form...". After careful consideration of the cited paragraphs on page 3, lines 35-40, Applicants respectfully submit that the complete teaching in this regard is that superimposed *mats* of different fibrous material are spirally wound into a two layer form with one layer being the outer layer and made of glass fibers, while the other layer creating the intermediate layers is made of mineral wool.

The earlier-submitted amendment to claim 9 clarified that the nonwoven web is provided continuously, as supported in the original specification and figures, further reinforced through the

use of first and second supply belts and a winding mandrel. These features remain in claim 9 in its present form. Significantly, the specification of the presently claimed subject matter does not disclose the use of mats of material. Indeed, mats of material would not be easily implemented on such mechanisms without additional control systems, etc. Thus, *B-E-H* is at least deficient for the reason that it fails to disclose, teach or suggest the particular features in association with "the pipe sleeve formed of a wound continuous nonwoven web with cured binder", as set forth in amended claim 9.

In addition, claim 9 now specifies that the "... an outer sheath reinforcing layer ... [is] ... added to a trailing end of the continuous nonwoven web and wound fully circumferentially ... with a leading end of the outer sheath reinforcing layer overlapping the trailing end of the continuous nonwoven web ..." As the Examiner pointed out in the Advisory Action (§10 of the Advisory Action), the features upon which Applicants rely should be recited in the claims. The Examiner further pointed out (also in §10 of the Advisory Action) that the broad disclosure of "trailing end" allegedly is disclosed by the cited art, at least in its broadest sense. It is submitted that the claim descriptions as now clearly set forth the claimed features.

Accordingly, the claims clearly distinguish Applicants' subject matter over the cited art, as suggested by the Examiner. In particular, the "... leading end of the outer sheath reinforcing layer overlapping the trailing end of the continuous nonwoven web ..." is neither shown nor suggested in any combination of the cited art.

Additionally, Applicants note that according to this reference, the process starts with two mats superimposed with each other. Applicants respectfully submit that if one were to put a couple of mats onto a mandrel and wind it thereon revolution by revolution, it is clear to someone of ordinary skill in the art that, because of the different diameters acting on each of the mats, the trailing ends thereof will not rest on the same place at the outside of the finished sleeve. In other words, the trailing end of the outer layer will rest at the sleeve body at a position where the trailing end of the inner layer is not reached. Thus, the outer layer of such construction

typically does not completely surround the roll; and consequentially the second layer will be exposed from the outside.

Claim 9 also now includes that the reinforcing layer is provided with means for allowing separation of wound layers in order to reduce external or internal diameter of the pipe. With respect to this feature, found in cancelled claim 18, and rejected in the Final Office Action over *B-E-H*, Applicants respectfully point out that claims clearly distinguish over *B-E-H*. Applicants note that although the Examiner has cited page 3, lines 40-45, the "slit" of *B-E-H* as disclosing such features of previously presented claim 18. This reference to "slit" of *B-E-H* could be either "a longitudinally extending slit 12 through the sidewall" or "a partial slit 14 diametrically opposed therefrom" both of which divide the pipe cover in halves 10a and 10b connected by a hinge 16 so that it may be opened as illustrated in Figure 4. In either case, the slit may reduce external circumference of the pipe in that the pipe becomes halved, but with respect to the diameter of the pipe itself, neither an external nor internal diameter is reduced as a result.

Further, it is pointed out that the provision of a "slit" precludes the use of a design in which the outer layer is "wound fully circumferentially around the continuous nonwoven web". The entire purpose of a slit is to enable the insulation to be positioned after the pipe is installed. The worker must accommodate the slit, typically by use of additional tape or adhesive.

Also, Applicants note that no explicit teaching is given in *B-E-H* to provide a reinforcing layer at the outer circumferentially side of a sleeve body which is wound all around thereof (to use the language of claim 9, "wound fully circumferentially around the continuous nonwoven web"). Moreover, no teaching is given that such outer layer may act as a trickle guard. It is further pointed out that the feature of the reinforcing layer wound fully circumferentially around the pipe is necessarily absent, due to the presence of the slits of *B-E-H*.

Accordingly, Applicants respectfully submit that *B-E-H* does not disclose, teach or suggest all claimed features of amended claim 9. Therefore, it is submitted that the features of amended claim 9, and therefore claim 9 is patentable over *B-E-H*.

Claims 10 and 14 are dependent from claim 9 and are patentable at least due to their dependency from claim 9.

Accordingly, Applicants respectfully requests reconsideration and withdrawal of the outstanding rejections.

#### **Claim Rejections under 35 U.S.C. §103(a)**

The Examiner rejected claims 1, 2, 6-8 and 19 under 35 U.S.C. §103(a) as being unpatentable over *B-E-H* in view of *Blau*; rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over *B-E-H* in view of *Blau*, as applied to claim 1 above, in view of *Hofmann*; rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over *B-E-H* in view of *Blau*, as applied to claim 2 above, in view of *Roth*; rejected claim 11 under 35 U.S.C. §103(a) as being unpatentable over *B-E-H*, as applied to claim 9 above, in view of *Roth*; rejected claim 13 under 35 U.S.C. §103(a) as being unpatentable over *Lauren* in view of *Seitz*; rejected claims 9, 15, 16 and 20 under 35 U.S.C. §103(a) as being unpatentable over *Blau* in view of *Seitz*; and rejected claim 17 under 35 U.S.C. §103(a) as being unpatentable over *B-E-H*, as applied to claim 9 above, in view of *Hartranft*.

#### **Response**

These rejections are traversed as Applicants submit that the Examiner is missing a number of arguably novel features of the presently claimed subject matter. In order to establish a *prima facie* case of obviousness, the Examiner must establish: (1) some suggestion or motivation to modify the reference(s) exists; (2) a reasonable expectation of success; and (3) the prior art references teach or suggest all of the claim limitations.

Amended claim 1 of the pending application recites:

"... a continuous nonwoven web made of mineral wool ... with an uncured binder, winding ... the nonwoven web ... [and] curing the binder, ... providing at least one reinforcing layer ... before inclusion of the nonwoven web in the pipe sleeve ... in such a way that during the winding said reinforcing layer becomes a constituent part of the pipe sleeve produced as a result, and providing an outer sheath reinforcing layer added to the trailing end of the nonwoven web after providing the reinforcing layer in such a way that said outer sheath reinforcing layer comes to lie on the outside of the pipe sleeve with the effect of a lamination ... arranged around the full circumference."

Claim 13 has similar recitations.

As discussed above, Applicants respectfully submit that *B-E-H* fails to disclose, teach or suggest "providing a continuous nonwoven web made of mineral wool" as recited in amended claim 1.

Further to the presently claimed subject matter, *B-E-H* is not fully enabling to disclose, teach or suggest that "... providing at least one reinforcing layer before the nonwoven web runs into the winder ..." as recited in independent claim 1. The Examiner has cited page 3, lines 35-40 and page 3, lines 55-60 of *B-E-H* as supporting such disclosure, but lines 35-40 disclose only that "the outer layer *Lf* and every other layer being made of glass fibre and the intermediate layers *Lm* between the glass fibre layers being made of mineral wool." Thus, *B-E-H* merely discloses that the outer layer and "every other layer" is made of a glass fibre, but does not discuss the composition of the inner most layer. Accordingly, *B-E-H* suggests that the composition of the inner most layer depends on whether the number of layers is odd or even. Applicants do not understand the applicability of the citation of lines 55-60 of *B-E-H*, which discuss the density of the finished cover and a comparison to "straight glas fibres," both elements that are not discussed in this portion of claim 1.

Admittedly, *B-E-H* does not disclose "that the reinforcing layer is added to the trailing end of the nonwoven web" as recited in independent claim 1. Applicants note that the Examiner agrees that *B-E-H* does not disclose the features of claim 1 according to which the reinforcing

layer is added to the trailing end of the nonwoven web. In this regard, he specifically refers to *Blau*, asserting that such a feature is disclosed in column 5, lines 55-65. Applicants respectfully disagree with the Examiner. Applicants agree that *Blau* teaches to roll a glass fiber felt on a mandrel, but disagree with the Examiner's interpretation that *Blau* teaches "that at least one reinforcing layer is provided *before* the nonwoven web runs into the winder" (emphasis added) as recited in Applicants' claim 1. However, *Blau* discloses (col. 5, lines 62-66) that "upon completion of the first revolution an aluminum foil will be inserted between the convolutions of the fiber felt with continuing the wrapping of the foil until five complete continuous spirals of foil are formed ... whereupon the inclusion of the foil was terminated and the convoluting of glass fiber was continued..." (emphases added). This construction is shown in the figure of *Blau*, wherein the metal foil is indicated by reference numeral 3 as described in col. 5, lines 33-47 of *Blau*.

Hence, there is not only *no* disclosure in *Blau* to add a reinforcing layer before the inclusion of nonwoven web in the pipe sleeve, but there is also no disclosure to add a reinforcing layer to the trailing end of the nonwoven web. In addition, *Blau* does not disclose a pipe sleeve having a reinforcing layer arranged around the full circumference of the sleeve body.

Therefore, Applicants respectfully submit that *Blau* fails to cure the deficiencies of *B-E-H* with respect to independent claim 1.

Accordingly, the features of independent claim 1 are patentable, and claim 1 is patentable over *B-E-H* and *Blau* individually, or in combination. Similarly, all claims dependent from claim 1, including claims 2, 6-8 and 19, are patentable over *B-E-H* and *Blau*, whether applied individually, or in combination, at least because of their dependency from claim 1.

Applicants assert that the claims dependent from claim 1 have additional patentable features, notwithstanding. For example, with respect to dependent claim 7, Applicants respectfully disagree with the Examiner's citation of page 3, lines 80-85 of *B-E-H* as disclosing "that the reinforcing layer is wetted with additional binder before being provided for the winding operation." These sections of *B-E-H* discuss "mineral wool impregnated with a suitable

"thermosetting binder," which is notably not a reinforcing layer. A few lines prior, *B-E-H* describes "glass fibre impregnated with a suitable thermosetting binder," but does not in any way suggest "that the reinforcing layer is wetted with additional binder." Thus, for at least this reason, *B-E-H* fails to teach, disclose or suggest the features of dependent claim 7.

With respect to dependent claim 5, rejected by the Examiner under 35 U.S.C. §103(a) as allegedly unpatentable over *B-E-H* in view of *Blau*, as applied to claim 1 above, in view of *Hofmann*, Applicants submit that *Hofmann* fails to cure the deficiencies of the combination of *B-E-H* and *Blau* with respect to independent claim 1, as discussed above. For example, *Hofmann* again discusses a split pipe sleeve, thereby unable to provide at least a "last layer arranged around the full circumference" as recited in Applicants' present claims. *Hofmann* even discusses that an additional "thin insulating layer 26 is inserted between the confronting faces of the sheath..." thereby further making it impossible for a "last layer to be arranged around the full circumference" as recited in Applicants' independent claim 1.

Additionally, Applicants respectfully submit that, while the Examiner's introduction of *Hofmann* is admittedly to address the reinforcing layer applied before the winding of the nonwoven web, *Hofmann* fails to suggest Applicants' technique. In contrast, Applicants' claim 5 "the reinforcing layer ... applied to the mandrel before the winding of the nonwoven web in such a way that it provides the inner surface of the pipe sleeve determining the clear internal diameter of the pipe sleeve" is different from the "synthetic-resin foil sleeve 24" disclosed in col. 4, lines 1-4 of *Hofmann*. This is because "the coiling mandrel is first provided with" is not of the same material as the "metal-foil layers 22" which allegedly provide reinforcement layers to the "insulating fabric layers 21" of *Hofmann*. It is respectfully submitted that this reaches to the teaching in that *Hofmann* fails to teach the very feature for which *Hofmann* is cited. Therefore there is no teaching under 35 U.S.C. §103(a).

Thus, in addition to failing to cure the deficiencies of the previously discussed combination, *Hofmann* also fails to disclose that "the at least one reinforcing layer... is applied to the winding mandrel... said reinforcing layer provides the inner surface of the pipe sleeve

determining the clear internal diameter" as there is no consistency in *Hofmann* as to which "reinforcement material" is used. Thus, for at least these reasons, the cited combination fails.

With respect to claim 3, rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over *B-E-H* in view of *Blau*, as applied to claim 2 above, in view of *Roth*, Applicants respectfully submit that *Roth* fails to cure the deficiencies of the combination of *B-E-H* and *Blau* with respect to amended independent claim 1, which claims 2 and 3 depend from, directly and indirectly, respectively, as discussed above.

With respect to claim 11, rejected under 35 U.S.C. §103(a) as being unpatentable over *B-E-H*, as applied to claim 9 above, in view of *Roth*, Applicants submit that *Roth* fails to cure the deficiencies of *B-E-H* with respect to amended independent claim 9, which claim 11 depends from, as discussed above.

With respect to claim 13, rejected under 35 U.S.C. §103(a) as being unpatentable over *Lauren* in view of *Seitz*, Applicants respectfully submit that the combination is improper and thus fails as col. 4, lines 54-64 of *Lauren* discloses that the "inner layer 3, which also consists of mineral wool" while page 2, lines 10-16 of *Seitz* discloses an "outer layer of glass wool." Thus, the combination not only fails to disclose use of the same material for the reinforcing layer, but further, fails to disclose as recited in amended claim 13, "said pipe sleeve further characterized in that the reinforcing layer is one of or a combination of a glass nonwoven or a woven glass fibre fabric; or includes one of a particulate material, a particulate infrared radiation absorbing material or a particulate heat shielding material; or includes one of a foil material, or a heat reflective foil containing a metal; or is treated with a biocide agent."

With respect to claims 9, 15, 16 and 20, rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over *Blau* in view of *Seitz*, Applicants respectfully submit that *Seitz* fails to cure the deficiency discussed above of *Blau* of not disclosing a "... the pipe sleeve formed of a wound continuous nonwoven web with cured binder, at least one reinforcing layer on the inner side of the pipe ..." as recited in amended claim 9 (emphasis added), as *Blau* discloses introduction of metal foil after one rotation of the mandrel, and *Seitz*

fails to disclose a reinforcing layer on the inner side of the pipe. Further, as the pipe of *Seitz* comprises only two layers, of two different mineral wools, preferably one rock, one glass, *Seitz* fails to disclose "an outer sheath reinforcing layer in the form of a trickle guard added to a trailing end of the continuous nonwoven web and wound fully circumferentially around the continuous nonwoven web with" as recited in amended claim 9. In this regard, the Examiner admits he is interpreting the layer as part of the pipe sleeve, and not an additional reinforcing layer, and accordingly the reference "teaches away from" Applicants' claimed subject matter.

Finally, the combination fails to disclose the feature recited in amended claim 9 wherein "... the reinforcing layer comprising means for allowing separation of wound layers in order to reduce external or internal diameter of the pipe."

With respect to claim 17, rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over *B-E-H*, as applied to claim 9 above, in view of *Hartranft*, Applicants respectfully submit that *Hartranft* fails to cure the deficiencies of *B-E-H* with respect to amended independent claim 9, which claim 17 depends from, as discussed above.

As discussed above, Applicants respectfully submit that amended independent claims 1, 9 and 13 are patentable over the cited prior art, an indication of which is kindly requested.

Applicants respectfully submit that the teachings of *B-E-H* and *Blau*, when considered, do not disclose the features of amended independent claim 1. Dependent claims 2, 3, 5-8, and 19 depend from independent claim 1. Accordingly, Applicants submit that dependent claims 2, 3, 5-8, and 19 are patentable at least by virtue of their dependency.

Applicants respectfully submit that the teachings of *Blau* and *Seitz*, when considered, do not disclose the features of amended independent claim 9. Dependent claims 15, 16 and 20 depend from independent claim 9. Accordingly, Applicants submit that dependent claims 15, 16 and 20 are patentable at least by virtue of their dependency.

Applicants respectfully submit that the teachings of *B-E-H* in view of *Roth*, the teachings of *Lauren* in view of *Seitz* and the teachings of *B-E-H* in view of *Hartranft*, when considered as discussed above, do not disclose the features of claims 11, 13 and 17, respectively.

It is therefore respectively submitted that the rejections under 35 U.S.C. 103(a) should be withdrawn.

**Examiner's Response to Applicants' Prior Arguments in Advisory Action**

The Examiner's acknowledgement of Applicants' arguments with respect to the cited art is noted. As indicated above, claim 9 now specifies particular features relating to the outer sheath reinforcing layer overlapping the trailing end of the continuous nonwoven web. Additionally Applicants the claim descriptions now clearly distinguish the claimed subject matter over the cited art in a manner to distinguish the outer sheath reinforcing layer overlapping the trailing end of the continuous nonwoven web.

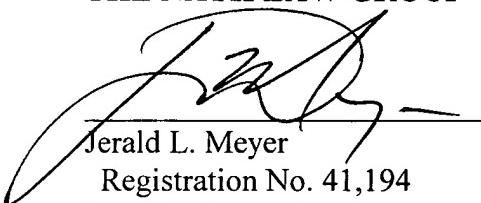
This is believed to fully address the issues raised by the Examiner.

The Examiner's help in setting forth these issues in the Advisory Action is appreciated by the Applicants, and is believed to have expedited the prosecution of this case.

**CONCLUSION**

In light of the foregoing, Applicants submit that the application is in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully request that the Examiner call the undersigned.

Respectfully submitted,  
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